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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,611	07/18/2003	Yoichi Momose	116623	2899

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EXAMINER	
KIM, RICHARD H	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

Office Action Summary	Application No.	Applicant(s)	
	10/621,611	MOMOSE, YOICHI	
	Examiner	Art Unit	
	Richard H. Kim	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (US 6,013,339).

Referring to claim 1, 6, 7 and 10, Yamada et al. discloses an electronic device comprising a pair of substrates (Fig. 5, ref. 12a, 12b); a liquid crystal layer provided between the pair of substrates (13); and a sealing material bonding the pair of substrates to each other and enclosing the liquid crystal layer between the pair of substrate (3); the sealing material containing a photocurable component and a thermosetting component (col. 10, lines 25-27), the photocurable component having a curing rate in the range of from 60% to 95% (col. 16, lines 2-3), and the thermosetting component having a curing rate in the rage of from 60%-90% (col. 16, lines 5-6), at least one of a color filter and a metal wire (11) disposed at a position corresponding to the sealing material, at least one of a color filter and a metal wire at least partially blocking ultraviolet rays. Yamada et al. further discloses a method of manufacturing comprising applying an adhesive onto at least one of surface of the pair of substrates to form a closed shape in a region of the surface thereof (Fig. 8, ref. 3); disposing spacers on at least one of the surfaces of the pair of substrates (2); dripping liquid crystal onto at least one of the surfaces of the pair of

substrates after the adhesive and spacers are disposed (13), bonding the pair of substrate to each other after the liquid crystal is dripped (col. 19, lines 19-23); and curing the adhesive after the bonding is formed, the adhesive being an uncured material which is formed to a sealing material by curing (col. 16, lines 10-15). Furthermore, Yamada et al. discloses the device wherein the liquid crystal is injected through a liquid crystal inlet (Fig. 2, ref. 9). However, the reference does not disclose that the *maximum* curing rate is in the rate of from 60% - 95%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the maximum curing rate to be from 60% - 90% since Yamada et al. discloses that the proper curing rate prevents the generation of defect goods in production due to alignment dislocation, and therefore improves production efficiency. Therefore, an artisan having ordinary skill in the art would have known to determine the optimum curing rate of the respective material in order to achieve excellent production efficiency (col. 16, lines 1-15).

Furthermore, Yamada et al. does not disclose that the photocurable component at portions of the sealing material that correspond to the at least one color filter and a metal wire has a curing rate of less than 60%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the photocurable component at portions of the sealing material that correspond to the at least one color filter and a metal wire has a curing rate of less than 60% since Yamada discloses the claimed bottom range of the curing ratio of 60%. Therefore, if the sealant is cured at a curing ratio of 60%, it is clearly apparent that the sealant above the wire, which would received less ultraviolet radiation than portions of the sealant not blocked by the wire, would have a curing ration that is less than 60%.

Referring to claims 2 and 3, Yamada et al. discloses a device wherein the sealing material includes a resin containing the photocurable component, a resin containing the photocurable component, a resin containing the thermosetting component, and a resin containing the photocurable component and the thermosetting component is the same molecular chain (col. 16, lines 28-67; col. 17, lines 1-10).

Referring to claim 4, Yamada et al. discloses the device wherein the photocurable component includes at least one of an acrylic group and a methacrylic group (col. 16, lines 28-37).

Referring to claim 5, Yamada et al. discloses that the thermosetting component includes an epoxy group (col. 4, lines 39-40).

Referring to claim 8, Yamada et al. discloses the method previously recited. Yamada et al. further discloses that the curing of the adhesive includes a light irradiation substep of curing the photocurable component (col. 16, lines 10-12), and the amount of light irradiation is 1000 to 6000 mJ/cm^2 (co. 17, lines 35-36).

Referring to claim 9, Yamada et al. disclose the method previously recited, and further discloses that the curing of the adhesive includes a heating substep of curing the thermosetting component. However, the reference does not disclose that the heating temperature and the heating time in the heating substep being set to 60 to 160 degrees Celsius and 20 to 300 minutes, respectively.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the heating time in the heating substep being to be set to 60 to 160 degrees Celsius and 20 to 300 minutes, respectively since the time and temperature in which to

efficiently cure the adhesive is a result effective variable. Determining the optimum time and temperature to cure the adhesive would result in efficient curing.

Response to Arguments

3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim
Examiner
Art Unit 2871

RHK

ANDREW SCHECHTER
PRIMARY EXAMINER